

CHAITANYA CHS, 2<sup>nd</sup> FLOOR, OFFICE # 206, SIDDHARTH NAGAR, S.V.ROAD, GOREGAON (W), MUMBAI 400062, MH, INDIA.  
 CONTACT: +9122 28725393 /94/ 95 | EMAILID: CARE@SUVCHEM.COM

## MATERIAL SAFETY DATA SHEET (MSDS)

### tert-AMYL ALCOHOL AR (FOR SYNTHESIS)

#### 1. Identification of the substance/mixture and of the company/undertaking

##### 1.1. Product identifier

Trade name : tert-AMYL ALCOHOL AR (FOR SYNTHESIS)

Product code : SS0112400500

Identification of the product : 2-methylbutan-2-ol  
 CAS No :75-85-4  
 EC No :200-908-9  
 Annex No :603-007-00-2

##### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use : Industrial. For professional use only.

##### 1.3. Details of the supplier of the safety data sheet

Company identification : SUVCHEM  
 Chaitanya Tower, 2nd Floor, Office # 206,  
 Siddharth Nagar, S.V. Road,  
 Goregaon (West), Mumbai - 400062,  
 Maharashtra, India.  
 Contact: +91 22 28725393 / 94 / 95  
 Email ID: info@suvchem.com/care@suvchem.com

##### 1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (9:00am - 6:00 pm) [ Office hours ]

#### 2. Hazards identification -DSD

##### 2.1. Classification of the substance or mixture

##### Classification EC 67/548 or EC 1999/45

Classification : F; R11  
 Xn; R20  
 Xi; R37/38

##### Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Specific Target Organ Toxicity - Single exposure - Respiratory tract irritation -  
 Category 3 - Warning (CLP : STOT SE 3) H335  
 Acute toxicity, Inhalation - Category 4 - Warning (CLP : Acute Tox. 4) H332  
 Skin irritation - Category 2 - Warning (CLP : Skin Corr. 2) H315

Physical hazards : Flammable liquids - Category 2 - Danger (CLP : Flam. Liq. 2) H225

##### 2.2. Label elements

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**MATERIAL SAFETY DATA SHEET (MSDS)**
**tert-AMYL ALCOHOL AR (FOR SYNTHESIS)**
**2. Hazards identification -DSD (continued)**
**Labelling EC 67/548 or EC 1999/45**
**Symbol(s)**

**Symbol(s)**

: F : Highly flammable  
 Xn : Harmful

**R Phrase(s)**

: R11 : Highly flammable.  
 R20 : Harmful by inhalation.  
 R37/38 : Irritating to respiratory system and skin.

**S Phrase(s)**

: S2 : Keep out of the reach of children.  
 S46 : If swallowed seek medical advice immediately and show this container or label.

**Contains**

: 2-methylbutan-2-ol

**Labelling Regulation EC 1272/2008 (CLP)**
**Hazard pictograms**

**Signal words**

: Danger

**Hazard statements**

: H225 : Highly flammable liquid and vapour.  
 H315 : Causes skin irritation.  
 H332 : Harmful if inhaled.  
 H335 : May cause respiratory irritation.

**Precautionary statements**
**• General**

: P102: Keep out of reach of children.  
 P103: Read label before use.  
 P101: If medical advice is needed, have product container or label at hand.

**• Prevention**

: P240: Ground/bond container and receiving equipment.  
 P241: Use explosion-proof electrical, ventilating, lighting, ..., equipment.  
 P210: Keep away from heat, sparks, open flames or hot surfaces. - No smoking.  
 P280: Wear protective gloves, protective clothing, eye protection, face protection.  
 P271: Use only outdoors or in a well-ventilated area.  
 P261: Avoid breathing dust, fume, gas, mist, vapours, spray.  
 P233: Keep container tightly closed.  
 P264: Wash thoroughly after handling.

**• Response**

: P302+P352: IF ON SKIN : Wash with plenty of soap and water.  
 P332+P313: If skin irritation occurs : Get medical advice.  
 P304+P340: IF INHALED : Remove to fresh air and keep at rest in a position comfortable for breathing.  
 P303+P361+P353: IF ON SKIN (or hair) : Remove immediately all contaminated clothing. Rinse skin with water/shower.  
 P363: Wash contaminated clothing before reuse.

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## MATERIAL SAFETY DATA SHEET (MSDS)

### tert-AMYL ALCOHOL AR (FOR SYNTHESIS)

#### 2. Hazards identification -DSD (continued)

- **Storage** : P370+P378: In case of fire: Use for extinction.  
 : P403+P233: Store in well-ventilated place. Keep container tightly closed.  
 P403+P235: Store in well-ventilated place. Keep cool.  
 P405: Store locked up.
- **Disposal considerations** : P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
- Contains** : 2-methylbutan-2-ol

#### 2.3. Other hazards

- Other hazards** : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

#### 3. Composition/information on ingredients

**Substance / Preparation** : 2-methylbutan-2-ol  
 CAS No :75-85-4  
 EC No :200-908-9  
 Annex No :603-007-00-2  
 Substance.

Substance name	Contents	CAS No	EC No	Annex No	REACH Ref.	Classification
2-methylbutan-2-ol	100 %	75-85-4	200-908-9	603-007-00-2	----	F; R11 Xn; R20 Xi; R37/38  Flam. Liq. 2 _ H225 Acute Tox. 4 (Inhal) _ H332 Skin Irrit. 2 _ H315 STOT SE 3 _ H335

Contains no other components or impurities which will influence the classification of the product.

#### 4. First aid measures

##### 4.1. Description of first aid measures

- Inhalation** : Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
- Skin contact** : Specific treatment (see on this label). Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Get medical advice. If skin irritation occurs : Wash contaminated clothing before reuse.
- Eye contact** : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- Ingestion** : Obtain emergency medical attention. Rinse mouth. Do NOT induce vomiting.

##### 4.2. Most important symptoms and effects, both acute and delayed

## MATERIAL SAFETY DATA SHEET (MSDS)

### tert-AMYL ALCOHOL AR (FOR SYNTHESIS)

#### 4. First aid measures (continued)

**Symptoms relating to use** : Danger of serious damage to health by prolonged exposure through inhalation. Causes skin irritation. May cause respiratory irritation.

#### 4.3. Indication of any immediate medical attention and special treatment needed

**General information** : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

#### 5. Fire-fighting measures

##### 5.1. Extinguishing media

**Suitable extinguishing media** : Foam. Dry powder. Carbon dioxide. Water spray. Sand.  
**Unsuitable extinguishing media** : Do not use a heavy water stream.  
**Surrounding fires** : Use water spray or fog for cooling exposed containers.

##### 5.2. Special hazards arising from the substance or mixture

**Flammable class** : Highly flammable liquid and vapour.  
**Hazardous combustion products** : Under fire conditions, hazardous fumes will be present.

##### 5.3. Advice for fire-fighters

**Protection against fire** : Do not enter fire area without proper protective equipment, including respiratory protection.  
**Special procedures** : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

#### 6. Accidental release measures

##### 6.1. Personal precautions, protective equipment and emergency procedures

**For emergency responders** : Equip cleanup crew with proper protection. Ventilate area.  
**Technical measures** : Use special care to avoid static electric charges.  
**Special precautions** : Remove ignition sources. No naked lights. No smoking.  
**For non-emergency personnel** : Evacuate unnecessary personnel.

##### 6.2. Environmental precautions

**Environmental precautions** : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

## MATERIAL SAFETY DATA SHEET (MSDS)

### tert-AMYL ALCOHOL AR (FOR SYNTHESIS)

#### 6. Accidental release measures (continued)

##### 6.3. Methods and material for containment and cleaning up

**Clean up methods** : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Store away from other materials. Collect spillage.

##### 6.4. Reference to other sections

See section 8. Exposure controls/personal protection

#### 7. Handling and storage

##### 7.1. Precautions for safe handling

**Handling** : Handle empty containers with care because residual vapours are flammable. Wash thoroughly after handling. Avoid breathing dust, fume, gas, mist, vapours, spray. Use only outdoors or in a well-ventilated area.

**Technical protective measures** : Provide good ventilation in process area to prevent formation of vapour. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical, ventilating, lighting, ..., equipment.

**Special precautions** : No naked lights. No smoking. Avoid breathing dust, fume, gas, mist, vapours, spray.

##### 7.2. Conditions for safe storage, including any incompatibilities

**Storage** : Keep only in the original container in a cool, well ventilated place. Keep in fireproof place. Ground/bond container and receiving equipment. Keep container tightly closed.

**Storage - away from** : Strong bases. Strong acids. Sources of ignition. Direct sunlight. Heat sources.

##### 7.3. Specific end use(s)

**Specific end use(s)** : None.

#### 8. Exposure controls/personal protection

##### 8.1. Exposure controls

**Personal protection** : Avoid all unnecessary exposure.

- **Respiratory protection** : In case of insufficient ventilation, wear suitable respiratory equipment.
- **Hand protection** : Wear protective gloves.
- **Skin protection** : Wear suitable protective clothing.
- **Eye protection** : Chemical goggles or safety glasses.

**MATERIAL SAFETY DATA SHEET (MSDS)**
**tert-AMYL ALCOHOL AR (FOR SYNTHESIS)**
**8. Exposure controls/personal protection (continued)**

- Others : When using, do not eat, drink or smoke.

**8.2. Control parameters**

Occupational Exposure Limits : No data available.

**9. Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

Physical state at 20 °C	: Liquid.
Colour	: Clear Colorless
Odour	: Camphor odor
Odour threshold	: No data available.
pH value	: No data available.
Melting point [°C]	: -12 °C
Decomposition point [°C]	: N/A
Critical temperature [°C]	: N/A
Auto-ignition temperature [°C]	: 437 °C
Flammability (solid, gas)	: Flammable. Highly flammable liquid and vapour.
Flash point [°C]	: 20 °C
Boiling point [°C]	: 102 °C
Initial boiling point [°C]	: N/A
Final boiling point [°C]	: N/A
Evaporation rate	: N/A
Vapour pressure [20°C]	: 16 hPa
Vapour pressure mm/Hg	: N/A
Vapour density	: 3
Density [g/cm <sup>3</sup> ]	: 0,81
Relative density, gas (air=1)	: 3,04
Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: N/A
Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: 6 at 118 g/l at 20 °
Viscosity at 40°C [mm <sup>2</sup> /s]	: N/A

**9.2. Other information**

## MATERIAL SAFETY DATA SHEET (MSDS)

### tert-AMYL ALCOHOL AR (FOR SYNTHESIS)

#### 9. Physical and chemical properties (continued)

Explosive properties	: N/A
Explosion limits - upper [%]	: 9,00%
Explosion limits - lower [%]	: 1,20%
Oxidising properties	: No data available.

#### 10. Stability and reactivity

##### 10.1. Reactivity

Reactivity : Not established.

##### 10.2. Chemical stability

Chemical stability : Stable under recommended storage conditions.

##### 10.3. Possibility of hazardous reactions

Hazardous reactions : Not established.

##### 10.4. Conditions to avoid

Conditions to avoid : Direct sunlight. Extremely high or low temperatures. Open flame.

##### 10.5. Incompatible materials

Materials to avoid : Strong acids. Strong bases.

##### 10.6. Hazardous decomposition products

Hazardous decomposition products : Fumes. Carbon monoxide. Carbon dioxide.  
May release flammable gases.

#### 11. Toxicological information

##### 11.1. Information on toxicological effects

##### Acute toxicity

- Inhalation : Harmful if inhaled.
- Dermal : Based on available data, the classification criteria are not met.
- Ingestion : Based on available data, the classification criteria are not met.

Corrosion : Based on available data, the classification criteria are not met.

Irritation : Causes skin irritation.  
May cause respiratory irritation.



**MATERIAL SAFETY DATA SHEET (MSDS)**
**tert-AMYL ALCOHOL AR (FOR SYNTHESIS)**
**11. Toxicological information (continued)**

<b>Sensitization</b>	: Based on available data, the classification criteria are not met.
<b>Mutagenicity</b>	: Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	: Based on available data, the classification criteria are not met.
<b>Toxic for reproduction</b>	: Based on available data, the classification criteria are not met.
<b>STOT-single exposure</b>	: Based on available data, the classification criteria are not met.
<b>STOT-repeated exposure</b>	: Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	: Based on available data, the classification criteria are not met.

**12. Ecological information**
**12.1. Toxicity**

**Toxicity information** : Not established.

**12.2. Persistence - degradability**

**Persistence - degradability** : Biodegradable.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential** : Not established.

**12.4. Mobility in soil**

**Mobility in soil** : Not established.

**12.5. Results of PBT and vPvB assessment**

**Results of PBT and vPvB assessment** : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

**12.6. Other adverse effects**

**Environmental precautions** : Avoid release to the environment.

**13. Disposal considerations**
**13.1. Waste treatment methods**

**General** : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.  
 Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.



**MATERIAL SAFETY DATA SHEET (MSDS)**
**tert-AMYL ALCOHOL AR (FOR SYNTHESIS)**
**13. Disposal considerations (continued)**

**Special precautions** : Handle empty containers with care because residual vapours are flammable.

**14. Transport information**
**14.1. Land transport (ADR-RID)**

**Proper shipping name** : PENTANOLS  
**UN N°** : 1105  
**H.I. nr** : 33  
**ADR - Class** : 3  
**Labelling - Transport** : 3 : Flammable liquid.



**ADR - Classification code** : F1  
**ADR - Group** : II  
**ADR - Packing instructions** : P001 R001  
**ADR - Limited Quantity** : 1 L  
**ADR - Tunnel code**



: D/E : Bulk or tank carriage: Passage forbidden through tunnels of category D and E. Other carriage: Passage forbidden through tunnels of category E.

**14.2. Sea transport (IMDG) [English only]**

**Proper shipping name** : PENTANOLS  
**UN N°** : 1105  
**IMO-IMDG - Class or division** : 3 : Flammable liquid.  
**IMO-IMDG - Packing group** : II  
**IMO-IMDG - Packing instructions** : P001  
**IMO-IMDG - Limited quantities** : 1 L  
**IMO-IMDG - Marine pollution** : No  
**EMS-Nr** : F-E S-D

**14.3. Air transport (ICAO-IATA) [English only]**

**Proper shipping name** : PENTANOLS

**MATERIAL SAFETY DATA SHEET (MSDS)**
**tert-AMYL ALCOHOL AR (FOR SYNTHESIS)**
**14. Transport information (continued)**

UN N°	: 1105
IATA - Class or division	: 3 : Flammable liquid.
IATA - Packing group	: II
IATA - Passenger and Cargo Aircraft	: ALLOWED
- Passenger and Cargo - Packing instruction	: 353
- Passenger and Cargo - Maximum Quantity/Packing	: 5 L
IATA - Cargo only	: ALLOWED
- Cargo only - Packing instruction	: 364
- Cargo only - Maximum Quantity/Packing	: 60 L
IATA - Limited Quantities	: 1 L
ERG-Nr	: 3L

**15. Regulatory information**
**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Safety, health and environmental regulations/legislation specific for the substance or mixture	: Ensure all national/local regulations are observed.
REACH Restrictions - Annex XVII	: The components of this product are not subject to restrictions.
REACH Authorisation - Annex XIV	: The components of this product are not subject to authorization.

**15.2. Chemical Safety Assessment**

Chemical Safety Assessment	: It has not been carried out.
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**16. Other information**

Revision	: Revision - See : *
Abbreviations and acronyms	: PBT: persistent, bioaccumulative and toxic. vPvB: very persistent and very bioaccumulative
Sources of key data used	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
List of relevant R phrases (heading 3)	: R11 : Highly flammable. R20 : Harmful by inhalation. R37/38 : Irritating to respiratory system and skin.
List of full text of H-statements in section 3	: H225 : Highly flammable liquid and vapour. H315 : Causes skin irritation. H332 : Harmful if inhaled.

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**MATERIAL SAFETY DATA SHEET (MSDS)****tert-AMYL ALCOHOL AR (FOR SYNTHESIS)****16. Other information (continued)****Further information**

H335 : May cause respiratory irritation.  
: None.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

**DISCLAIMER:**

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
- **SUVCHEM** shall not be responsible for any damage resulting from handling or from contact with the above product.
- **SUVCHEM** provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

**End of document**